

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

SETI-0006

Application Number

10/659,183

Applicant(s)

Fareed et al.

Filing Date

September 10, 2003

Group Art Unit

Unknown

*EXAMINER

INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

"Ferroelectric Semiconductors," V. M. Fridkin, Russia (1976), p. 90 (pp. 64-65 in English version).

"High Pinch-off Voltage AlGaIn-GaN Heterostructure Field Effect Transistor," M. S. Shur et al., Proceedings of ISDRS-97, Charlottesville, VA, December 1997, pp. 377-380.

"Optoelectronic GaN-Based Field Effect Transistors," M. S. Shur et al., SPIE Vol. 2397, pp. 294-303.

"Current/Voltage Characteristic Collapse in AlGaIn/GaN Heterostructure Insulated Gate Field Effect Transistors at High Drain Bias," M. A. Khan et al., Electronic Letters, Vol. 30, No. 25, December 8, 1994, pp. 2175-2176.

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DATE CONSIDERED

6/13/04

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
P2		US006359292B1	03-2002	Sugawara et al.			
↓		US006316793B1	11-2001	Sheppard et al.			
↓		US005981977A	11-1999	Furukawa et al.			
K2		US005851905A	12-1998	McIntosh et al.			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

P2		"High-Power Microwave GaN/AlGaIn HEMT's on Semi-Insulating Silicon Carbide Substrates," S. T. Sheppard et al., IEEE Electron Device Letters, Vol. 20, No. 4, April 1999, pp. 161-163.
K2		"High Performance Microwave Power GaN/AlGaIn MODFETs Grown By RF-Assisted MBE," N.X. Nguyen et al., Electronics Letters, Vol. 36, No. 5, 2nd March 2000, pp. 468-469.

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"Two Dimensional Electron Gas Enhancement in AlGaIn/GaN/InGaIn/GaN Quantum Well Structures," A. D. Bykhovski et al., Proceedings of 1999 International Device Research Symposium (ISDRS-99), ISBN 1-880920-06-9, pp. 307-310 (1999).

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"AlGaIn/InGaIn/GaN Double Heterostructure Field-Effect Transistor," Grigory Simin et al., The Japan Society of Applied Physics, Japanese Journal of Applied Physics, Vol. 40, Part 2, No. 11A, 1 November 2001, pp. L1142-L1144.

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*EXAMINER INITIAL	OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>
KZ	"Low Frequency Noise in AlGaIn/InGaIn/GaN Double Heterostructure Field Effect Transistors," N. Pala et al., Solid-State Electronics 47 (2003), pp. 1099-1104.
	"Low-Frequency Noise in GaN-Based Field Effect Transistors," M. E. Levinshstein et al., Noise and Fluctuations in Control in Electronic Devices, Chapter 4, 2002, pp. 49-65.
	"Energy Band/Lattice Mismatch Engineering in Quaternary AlInGaIn/GaN Heterostructure," M. Asif Khan et al., Phys. Stat, Sol. (a) 176, 227 (1999), pp. 227-230.
	"Pulsed Atomic Layer Epitaxy of Quaternary AlInGaIn Layers," J. Zhang et al., Applied Physics Letters, Vol. 79, No. 7, 13 August 2001, pp. 925-927.
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	"III-Nitride, SiC and Diamond Materials for Electronic Devices," D. Kurt Gaskill et al., Materials Research Society Symposium Proceedings Vol. 423, 1996, pp. 75-79.
	"Pyroelectric and Piezoelectric Properties of GaN-Based Materials," M. S. Shur et al., MRS Internet J. Nitride Semicond. Res. 4S1, G1.6 (1999) pp. 1-12.
	"Electron Transport in Wurtzite Indium Nitride," O'Leary et al., Journal of Applied Physics, Vol. 83, No. 2, 15 January 1998, pp. 826-829.
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KZ	"Piezoelectric Charge Densities in AlGaIn/GaN HFETs," P.M. Asbeck et al., Electronics Letters, Vol. 33, No. 14, 3 July 1997, pp. 1230-1231.

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*EXAMINER INITIAL	OTHER DOCUMENTS	(Including Author, Title, Date, Pertinent Pages, Etc.)
KZ	41	"Spontaneous Polarization and Piezoelectric Constants of III-V Nitrides," Bernardini et al., Physical Review B, Vol. 56, No. 16, 15 October 1997-11, pp. R10024-R10027.
↓	51	"GaAs Devices and Circuits," M. S. Shur, Microdevices Physics and Fabrication Technologies, Plenum Publishing Corporation, New York (1987) p. 410.
↓	51	"The Influence of the Strain-Induced Electric Field on the Charge Distribution in GaN-AlN-GaN Structure," Bykhovski et al., Journal of Applied Physics, Vol. 74, No. 11, 1 December 1993, pp. 6734-6739.
↓	51	"Pyroelectricity in Gallium Nitride Thin Films," Bykhovski et al., Applied Physics Letters, Vol. 69, No. 21, 18 November 1996, pp. 3254-3256.
↓	51	"Lattice and Energy Band Engineering in AlInGaN/GaN Heterostructures," M. Asif Khan et al., Applied Physics Letters, Vol. 76, No. 9, 28 February 2000, pp. 1161-1163.
KZ	51	"Electron Mobility in Modulation-Doped AlGaIn-GaN Heterostructures," R. Gaska et al., Applied Physics Letters, Vol. 74, No. 2, 11 January 1999, pp. 287-289.

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